Central Plate
Electronics Co., Ltd.

Fast Recovery Rectifiers

FR101 THRU FR107 50 to 1000 V 1.0 A

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-O rate flame retardant
- Lead: Axial leads, solder able per MIL- STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 250℃/10 seconds/.375",(9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: 0.34 gram
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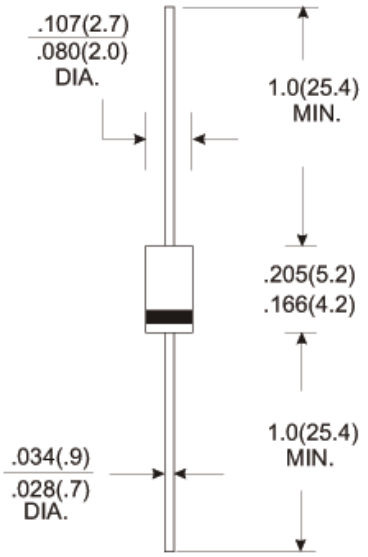
DO-41



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load . For capacitive load, derate current by 20%

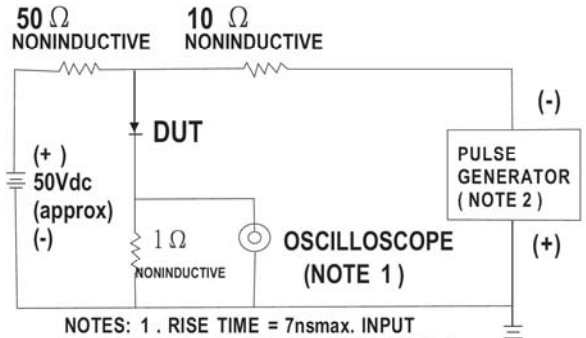
Type Number	Symbols	FR101	FR102	FR103	FR104	FR105	FR106	FR107	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current. 375" (9.5mm) Lead Length@ TA =55℃	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amp
Maximum instantaneous Forward Voltage @1.0A	V_F	1.3							Volts
Maximum Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage @ T_A=125℃	I_R	5.0 100							uAmp
Maximum Reverse Recovery Time (Note 1)	TRR	150				250	500		nS
Typical Junction Capacitance (Note2)	C_J	15							pF
Typical Thermal Resistance (Note3)	$R_{\theta JA}$	65							℃/W
Operating and Storage Temperature Range	T_J T_{STG}	-55 to +150							℃

NOTES:

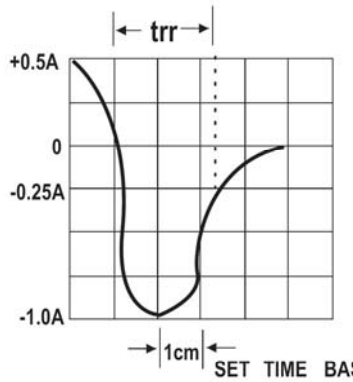
1. Reverse Recovery Test Conditions: I_F =0.5A, I_R =1.0A, I_{RR} =0.25A
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
3. Thermal Resistance from Junction to Ambient PC Board Mounting, 9.5mm Lead Length.

RATINGS AND CHARACTERISTIC CURVES (FR101 THRU FR107)

FIG . 1 -REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1 . RISE TIME = 7nsmax. INPUT IMPEDANCE= 1 MEGOHM 22pf
2 . RISETIME = 10ns max.SOURSE IMPEDANCE = 50ohmsf



SET TIME BASE FOR 5/ 10ns / cm

FIG . 2- MAXIMUM FORWARD CURRENT DERATING

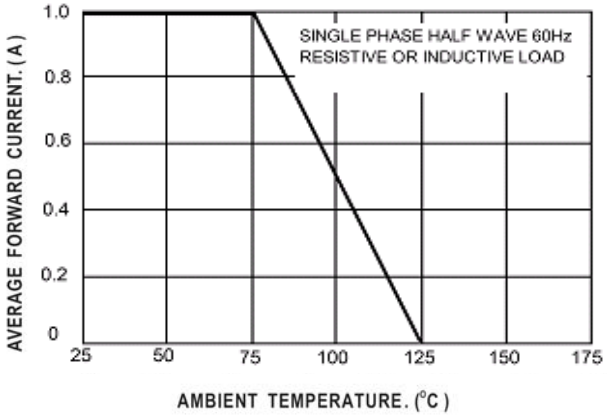


FIG . 3-- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

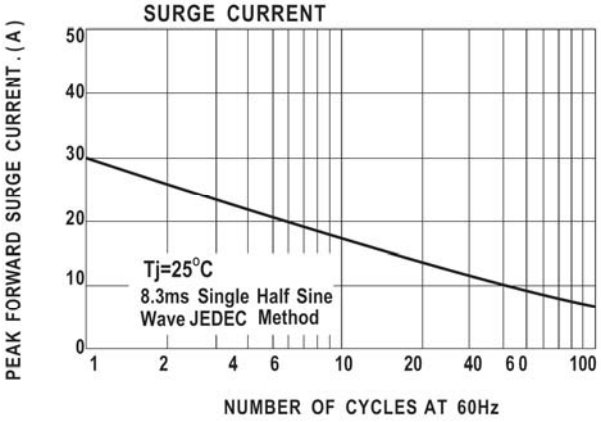


FIG . 4 -TYPICAL FORWARD CHARACTERISTICS

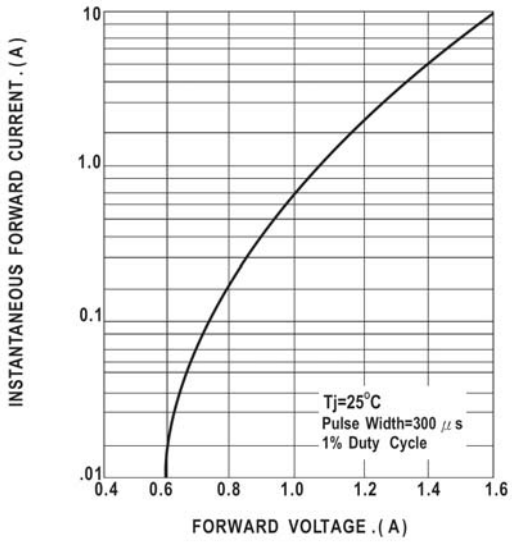


FIG . 5 -TYPICAL JUNCTION CAPACITANCE